

April 15, 1890.

G. A. Boulenger, Esq., F.Z.S., in the Chair.

The following papers were read :—

1. Second Report on Additions to the Batrachian Collection in the Natural-History Museum<sup>1</sup>. By G. A. BOULENGER.

[Received March 18, 1890.]

(Plates XXV. &amp; XXVI.)

Our knowledge of the species of Batrachians increases rapidly. After considering carefully every description that has been published since the beginning of 1882, I find that as many as 1119 apparently valid species are known at present, viz. 960 *Ecaudata*, 122 *Caudata*, and 37 *Apoda*.

The collection in the British Museum keeps pace with this increase, as testified by the following list of additions received during the last four years. In fact, the rate of increase has steadily risen since the collection of Frogs was first put in order by Dr. Günther in 1858<sup>2</sup>. The number of species then represented in the Museum was estimated at 214 (1691 specimens). In a report published ten years later by Dr. Günther<sup>3</sup> the number had risen to 313. In the second edition of the Catalogue, prepared by me and issued in 1882, the number of species was given as 522, and the number of specimens 4692. 63 species were added from 1882 to the middle of 1886, and 74 more are enumerated in the present report. So that the Museum possesses at present examples of about 660 species of Frogs, illustrated by over 6900 specimens. Thus we see that the increase in the number of species represented in the Museum has been at the rate of 10 per annum from 1858 to 1868, of 15 per ann. from 1868 to 1882, of 16 per ann. from 1882 to 1886, and of 18½ per ann. from 1886 to the present day.

The number of Tailed Batrachians in the Collection is now 85 species and about 1340 specimens; of Apodals, 29 species and 156 specimens.

- I. *List of the Species, new or previously unrepresented, added to the collection since June 1886.*

(An asterisk indicates type specimens.)

## ECAUDATA.

\*1. *Rana boulengeri*, Gthr. Ann. N. II. (6) iv. 1889, p. 222.—Ichang (*Pratt*).

\*2. *Rana macroscelis*, Blgr. Ann. N. II. (6) i. 1888, p. 345.—New Guinea (*Forbes*).

<sup>1</sup> Cf. P. Z. S. 1886, p. 411.

<sup>3</sup> P. Z. S. 1868, p. 478.

<sup>2</sup> Catalogue of Batrachia Salientia.

- \*3. *Rana dorica*, Blgr. Ann. Mus. Genova, (2) v. 1887, p. 482.—Tenasserim, Mergui (*Theobald, Beddome, Anderson*).
4. *Rana utricularia*, Harl.—Florida (*Bollman*).
5. *Rana amurensis*, Blgr. Bull. Soc. Zool. France, 1886, p. 598.—Lake Kanka and Corea (*Fischer*).
- \*6. *Rana leithii*, Blgr. Ann. N. H. (6) ii. 1888, p. 506.—Bombay (*Leith*).
7. *Rana galamensis*, D. & B.—Niger Benue.
- \*8. *Rana humeralis*, Blgr. Ann. Mus. Genova, (2) v. 1887, p. 420.—Upper Burma (*Fea*).
- \*9. *Rana labialis*, Blgr. Ann. N. H. (5) xix. 1887, p. 345.—Malacca (*Hervey*).
- \*10. *Rana flavicrus*, Blgr. Ann. N. H. (6) iv. 1889, p. 245.—Madagascar (*Majaster*).
- \*11. *Rana redimita*, Blgr. l. c.—Madagascar (*Majaster*).
- \*12. *Rana biporus*, Blgr. l. c. p. 246.—Madagascar (*Majaster*).
- \*13. *Rana himalayana*, Blgr. Ann. N. H. (6) ii. 1888, p. 507.—Darjeeling (*Jerdon, Blanford*).
14. *Rhacophorus leprosus*, Tsch.—Perak (*Wray*).
- \*15. *Rhacophorus opisthodon*, Blgr. Ann. N. H. (6) i. 1888, p. 105.—Madagascar.
16. *Rhacophorus viridis*, Hallow.—Loo Choo Islands (*Pryer*).
- \*17. *Rhacophorus albilabris*, Blgr. Ann. N. H. (6) i. 1888, p. 105.—Madagascar (*Baron*).
- \*18. *Ixalus vittatus*, Blgr. Ann. Mus. Genova, (2) v. 1887, p. 421.—Bhamo (*Fea*).
- \*19. *Cornufer johnstoni*, Blgr. P. Z. S. 1887, p. 564.—Rio del Rey, W. Africa (*Johnston*).
20. *Phrynobatrachus acridooides*, Cope.—Kiduwe, E. Africa (*Jackson*).
- \*21. *Batrachylodes vertebralis*, Blgr. P. Z. S. 1887, p. 337.—Solomon Islands (*Woodford*).
22. *Arthroleptis pæcilonotus*, Ptrs.—Gold Coast (*Burton & Cameron*).
23. *Rappia pusilla*, Cope.—Brass, Niger.
- \*24. *Rappia sordida*, Fischer, JB. Wiss. Anst. Hamb. v. 1888, p. 10.—Cameroon (*Fischer*).
25. *Hylambates anchietæ*, Bocage.—Angola (*Bocage*).
- \*26. *Hylambates angolensis*, Bocage.—Angola (*Bocage*).
27. *Phyllobates limbatus*, Cope.—Cuba.
- \*28. *Phyllobates trinitatis*, Garm. Bull. Essex Inst. xix. 1887, p. 13.—Trinidad (*Agassiz*).
- \*29. *Mantella baroni*, Blgr. Ann. N. H. (6) i. 1888, p. 106<sup>1</sup>.—Madagascar (*Baron*).
30. *Phryniscus longirostris*, Cope<sup>2</sup>.—Ecuador.
- \*31. *Engystoma leucostictum*, Blgr. Ann. N. H. (6) i. 1888, p. 416.—Sta. Catharina, Brazil (*Michælis*).

<sup>1</sup> = *Phrynomantis maculatus*, Thominot, 1889.

<sup>2</sup> = *Phryniscus boussingaulti*, Thominot, 1889.

- \*32. *Microhyla inornata*, Blgr. P. Z. S. 1890, p. 37.—Deli, Sumatra (*Moesch*).
- \*33. *Phrynella pulchra*, Blgr. Ann. N. H. (5) xix. 1887, p. 346.—Malacca (*Hervey*); Deli, Sumatra (*Moesch*).
- \*34. *Phrynella pollicaris*, Blgr. P. Z. S. 1890, p. 37.—Perak (*Wray*).
- \*35. *Cucosternum nanum*, Blgr. Ann. N. H. (5) xx. 1887, p. 51.—Caffraria (*Weale*).
- \*36. *Callulops doriae*, Blgr. Ann. N. H. (6) i. 1888, p. 345.—New Guinea (*Forbes*).
- \*37. *Platyhyla grandis*, Blgr. Ann. N. H. (6) iv. 1889, p. 247.—Madagascar (*Majaster*).
- \*38. *Platypelis pollicaris*, Blgr. Ann. N. H. (6) i. 1888, p. 106.—Madagascar (*Baron*).
- \*39. *Genyophryne thomsoni*, Blgr., *infra*.—Sudest Island, New Guinea (*B. Thomson*).
- \*40. *Hylodes plicifera*, Blgr. Ann. N. H. (6) ii. 1888, p. 41.—Iguarasse, Pernambuco (*Ramage*).
- \*41. *Hylodes ramagii*, Blgr. l. c.—Iguarasse (*Ramage*).
- \*42. *Ceratophrys calcarata*, Blgr., *infra*.—Colombia (*Fischer*).
- \*43. *Paludicola fischeri*, Blgr., *infra*.—Venezuela (*Fischer*).
- \*44. *Paludicola bischoffii*, Blgr. Ann. N. H. (5) xx. 1887, p. 296.—Rio Grande do Sul (*Bischoff*).
- \*45. *Leptodactylus prognathus*, Blgr. Ann. N. H. (6) i. 1888, p. 187.—Rio Grande do Sul (*Ihering*).
- \*46. *Limnodynastes fletcheri*, Blgr. Ann. N. H. (6) ii. 1888, p. 142.—Victoria (*Fletcher*).
- \*47. *Crinia victoriana*, Blgr. l. c.—Victoria (*Fletcher*).
- \*48. *Eupemphix nana*, Blgr. Ann. N. H. (6) i. 1888, p. 187.—Sta. Catharina, Brazil (*Michaëlis*).
- \*49. *Eupemphix trinitatis*, Blgr. Ann. N. H. (6) iii. 1889, p. 307.—Trinidad (*Hart*).
- \*50. *Bufo jerboa*, Blgr., *infra*.—S.E. Borneo (*Fischer*).
- \*51. *Bufo muelleri*, Blgr. Ann. N. H. (5) xx. 1887, p. 52.—Mindanao (*F. Müller*).
52. *Bufo debilis*, Gir.—Texas (*Taylor*).
- \*53. *Bufo superciliaris*, Blgr. P. Z. S. 1887, p. 565.—Rio del Rey, W. Africa (*Johnston*).
- \*54. *Bufo macrotis*, Blgr. Ann. Mus. Genova, (2) v. 1887, p. 422.—Kakhyen hills, Upper Burma (*Feu*).
- \*55. *Bufo parvus*, Blgr. Ann. N. H. (5) xix. 1887, p. 346.—Malacca (*Hervey*); Deli, Sumatra (*Moesch*).
- \*56. *Bufo quadriporcatus*, Blgr. l. c. p. 347.—Malacca (*Hervey*), Perak (*Wray*); Deli, Sumatra (*Moesch*).
- \*57. *Bufo philippinicus*, Blgr. l. c. p. 348.—Puerta Princesa (*Everett*).
58. *Cophophryne sikkimensis*, Blyth.—Sikkim (*Blanford*).
59. *Hyla tangsdorffii*, D. & B.—Sta. Catharina, Brazil (*Ihering*).
- \*60. *Hyla copii*, Blgr. Ann. N. H. (5) xx. 1887, p. 53.—Texas (*Forrer*).

- \*61. *Hyla bischoffii*, Blgr. l. c. p. 298.—Rio Grande do Sul (*Bischoff*).
- \*62. *Hyla stepheni*, Blgr. P. Z. S. 1887, p. 579.—Port Hamilton, Corea (*Stephen*), Ussuri R. (*Fischer*).
- \*63. *Hyla phrynoderma*, Blgr. Ann. Mus. Genova, (2) vii. 1889, p. 248.—Colonia Resistencia, Argentine Republic (*Spegazzini*).
- \*64. *Hyla lutea*, Blgr. P. Z. S. 1887, p. 337.—Solomon Islands (*Woodford*).
- \*65. *Hyla nana*, Blgr. Ann. Mus. Genova, (2) vii. 1889, p. 249.—Colonia Resistencia (*Spegazzini*).
- \*66. *Hyla bivittata*, Blgr. Ann. N. H. (6) i. 1888, p. 188.—Sta. Catharina (*Michaëlis*).
- \*67. *Hyla marginata*, Blgr. Ann. N. H. (5) xx. 1887, p. 298.—Rio Grande do Sul (*Bischoff*).
68. *Hyla miotympanum*, Cope.—Mexico (*Copenhagen Mus.*).
- \*69. *Hyla cathurinae*, Blgr. Ann. N. H. (6) i. 1888, p. 417.—Sta. Catharina (*Michaëlis*).
- \*70. *Nototrema fissipes*, Blgr. Ann. N. H. (6) ii. 1888, p. 42.—Iguarasse, Pernambuco (*Ramage*).
71. *Leptobrachium feæ*, Blgr. Ann. Mus. Genova, (2) iv. 1887, p. 512.—Kakhyen hills, Upper Burma (*Fea*).
72. *Bombinator igneus*, Laur.<sup>1</sup>—Germany, Denmark, Sweden, Austria.
- \*73. *Bombinator orientalis*, Blgr. Ann. N. H. (6) v. 1890, p. 143.—Chefoo (*Swinhoe*); Corea (*Carpenter*); Ussuri (*Fischer*).
74. *Alytes cisternasii*, Boscá.—Spain (*Boscá*).

## CAUDATA.

1. *Molge meridionalis*, Cope, Bull. U. S. Nat. Mus. 17, 1880, p. 30.—Texas (*Taylor*).
- \*2. *Hynobius leechii*, Blgr. Ann. N. H. (5) xix. 1887, p. 87.—Corea (*Leech*).
- \*3. *Hynobius chinensis*, Gthr. Ann. N. H. (6) iv. 1889, p. 222.—Ichang (*Pratt*).

## APODA.

1. *Cæcilia polyzona*, Fisch.—Panama (*Fischer*).
2. *Gymnopsis oligozona*, Cope.—Guatemala (*F. Müller*).
- \*3. *Siphonops hardyi*, Blgr. Ann. N. H. (6) i. 1888, p. 189.—Porto Real, Rio Janeiro (*Hardy du Dréneuf*).

II. *Descriptions of new Species.*

## GENYOPHRYNE, g. n.

Pupil horizontal. Tongue oblong, entire, free at the sides. Teeth on the palatine bones. Eight or nine small teeth on the anterior

<sup>1</sup> The European specimens referred to *B. igneus* in the Catalogue belong all to *B. pachypus*, Bp.

extremity of each ramus mandibuli. A denticulated transverse dermal ridge in front of the œsophagus. Ear hidden. Fingers free; toes webbed at the base, the tips slightly dilated; outer metatarsals bound together. No præcoracoid; sternum cartilaginous. Transverse processes of sacral vertebra moderately dilated.

*Geuyophryne* may be regarded as the type of a new family of Firmisternia, *Geuyophrynidæ*, characterized by absence of maxillary teeth and presence of mandibular teeth. In all but the latter character it agrees with the *Engystomatidæ*.

GENYOPHRYNE THOMSONI. (Plate XXV. fig. 1.)

Very similar in appearance to *Rhombophryne testudo*, Bttg. Head large and much depressed; eyes small and wide apart. First finger shortest, third much longer than second or fourth. Inner metatarsal tubercle indistinct. Heel with a triangular dermal process. Skin smooth. Pinkish brown above, variegated with blackish; temples whitish; a light line on each side from the eye along the back; hinder side of thighs and lower surface of tarsus black.

From snout to vent 32 millim.

A single specimen was obtained by Mr. Basil Thomson on Sudest Island, between New Guinea and the Lonisiade Archipelago. It is unfortunately in very bad condition.

CERATOPHRYS CALCARATA. (Plate XXVI.)

Vomerine teeth in two very small, very indistinct groups between the choanæ. Head large, bony; a supratemporal bony ridge; nostril nearer the eye than the tip of the snout; tympanum perfectly distinct, a little smaller than the eye; interorbital space concave; upper eyelid prolonged into a small "horn." First finger longer than second; toes hardly half webbed; inner metatarsal tubercle very large, shovel-shaped, sharp-edged; a rather indistinct tarsal fold. The tarso-metatarsal articulation reaches the tympanum. Upper parts with small very prominent tubercles, the largest of which are ribbed. No dorsal shield. Dark olive above, with paler symmetrical markings; an arrow-headed green band on the back, widening and bifurcating between the eyes; lower parts with a few brown spots; metatarsal spur black.

From snout to vent 70 millim.

A single specimen, a female, obtained by Hr. Dämel in Colombia, was in the late Dr. J. G. Fischer's collection, recently acquired by the Trustees of the British Museum.

PALUDICOLA FISCHERI. (Plate XXV. fig. 2.)

Tongue elliptic, entire. Vomerine teeth none. Snout rounded, as long as the diameter of the orbit; interorbital space as broad as the upper eyelid; tympanum rather indistinct, about half the diameter of the eye. Fingers slender, first not extending quite as far as second; toes slender, fringed, with a slight rudiment of web; subarticular tubercles moderately large but very prominent; a small tarsal tubercle;

two oval, blunt metatarsal tubercles, inner more elongate and nearer its fellow than the tarsal tubercle. The tibio-tarsal articulation reaches the centre of the eye. Skin smooth; a large, flat, oval lumbar gland. Grey-brown above, with a blackish lateral band; lumbar gland with a black, light-edged ocellus; hind limbs with dark cross-bands; hinder side of thighs white-dotted; lower parts white, speckled with brown.

From snout to vent 33 millim.

A single female specimen from Venezuela, from Dr. Fischer's collection.

#### BUFO JERBOA. (Plate XXV. fig. 3.)

Allied to *Bufo leptopus*, Gthr., but with still longer hind limbs. The femoro-tibial articulation reaches the shoulder, the tibio-tarsal far beyond the tip of the snout, and the tibia measures two thirds the length of head and body. In *B. leptopus* the tibia measures half the length of head and body, and the tibio-tarsal articulation reaches the eye or between the eye and tip of the snout. Snout strongly projecting; loreal region vertical; interorbital space as broad as the upper eyelid; tympanum close to, and measuring half the diameter of the eye. First and second fingers equal; toes one-third webbed. Upper parts with small smooth warts; no distinct parotoids. Brown above, limbs with darker cross-bands; an X-shaped dark marking on the middle of the back; throat brown. Male with an internal subgular vocal sac and brown nuptial asperities on the inner finger.

From snout to vent 30 millim.

A single male specimen, collected by Hr. Grabowsky in S.E. Borneo, and mentioned in the list published by Fischer (Arch. f. Nat. 1885, p. 43) as *B. leptopus*. It is particularly curious to find in Borneo, which is the home of the most long-legged *Rana* (*R. jerboa*, Gthr.), a kind of Toad which by far exceeds all others in the length of the hind limbs.

#### EXPLANATION OF THE PLATES.

##### PLATE XXV.

- Fig. 1. *Genyophryne thomsoni*.  
 1 a. Open mouth.  $\times 2$ .  
 1 b. Right ramus of mandible.  $\times 3$ .  
 2. *Paludicola fischeri*.  
 2 a. Open mouth.  $\times 2$ .  
 3. *Bufo jerboa*.

##### PLATE XXVI.

*Ceratophrys calcarata*, with side view of head.